UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,725	09/09/2003	Ed H. Frank	14180US02	2800

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EXAMINER
GOETZE, SIMON A

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
05/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/658,725	FRANK ET AL.
	Examiner	**Art Unit**	
	Simon A. Goetze	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 March 2007*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-25* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *09 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's response filed March 12, 2007. Claims 1-25 are still pending. **This action is made FINAL.**

Specification

The objection to the specification has been withdrawn, as it has been corrected by the present amendment.

Claim Objections

The objection to claim 12 has been withdrawn, as it has been corrected by the present amendment.

Response to Arguments

Applicant's arguments filed March 12, 2007 have been fully considered but they are not persuasive.

The argued features (of independent claims 1, 9, and 17), i.e., a method, machine-readable storage, having stored thereon a computer program having at least one code section, and a system for bandwidth management in a hybrid wired/wireless local area network, comprising receiving a first messaging protocol message for establishing a communication session; determining an available communication bandwidth for the network; allocating bandwidth; and

notifying an access point of the allocated bandwidth, reads upon Choksi as modified by Sundar

et al. as follows.

Choksi is discussing a method and a system for managing real-time bandwidth in a

wireless network. Choksi discusses the bandwidth allocation controller receiving a call

admission request from the network. Therefore disclosing the limitation of "receiving from at

least one of a first access point and a first switch, at least a first messaging protocol message for

establishing a communication session." Choski further discusses processing the call admission

request by verifying if there is available bandwidth to create the communication, and that the

radio link can be an 802.11 based WLAN link. Therefore discloses "responsive to said first

messaging protocol message, determining an available communication bandwidth for at least a

portion of the hybrid wired/wireless local area network." Choksi then discusses making the

decision to allow a call, and allocating the bandwidth necessary to make the connection.

Therefore disclosing the limitation of "allocating bandwidth to accommodate said

communication session." It is understood in the art, that once a connection is allowed, the access

point would be notified, but Choksi fails to specifically disclose this limitation. Choksi was

modified by Sundar et al. to discuss this communication. Sundar et al. discusses notifying an

access point that bandwidth has been allocated. Therefore disclosing the limitation of "notifying

said first access point of said allocated bandwidth using at least a second messaging protocol

message."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
      or nonobviousness.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1.   **Claims 1-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Choksi (US**

Patent 6,978,144) in view of **Sundar et al. (US Patent Application Publication**

2003/0134650).

Consider **claim 1**, Choksi discloses a method for providing bandwidth management in a hybrid wired/wireless local area network *(Abstract)*, the method comprising:

receiving from at least one of a first access point and a first switch, at least a first messaging protocol message for establishing a communication session *(call admission request is submitted – Column 7, Lines 5-15 and 33-41)*;

responsive to said first messaging protocol message, determining an available communication bandwidth for at least a portion of the hybrid wired/wireless local area network *(current bandwidth usage plus the requested bandwidth must not exceed a threshold – Column 7, Lines 61-67; Column 8, Lines 1-5; radio link can be an 802.11 based WLAN Column 3, Line 35)*; and

allocating bandwidth to accommodate said communication session *(read as the request is allowed – Column 8, lines 1-5)*.

However, Choksi discloses the allocation of resources and allowance of call admission requests, but fails to specifically disclose the notification to the first access point of the communication system to commence the connection.

In related prior art, Sundar et al. discloses a call connection management system for hybrid wired/wireless (WWAN and WLAN) networks which performs call setup functions such as channel assignment based upon requests from users. During the call connection setup, initiated by, for example, a handoff scenario, the serving BSC informs the desired BSC of the desire to handoff, and once the operation is the complete, acknowledgements are returned to the initiating parties *(Figure 12 – Page 6, Paragraphs 0074-0075)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Sundar et al. with those of Choksi in order to provide users with necessary bandwidth to complete their communications and control a network so that it's bandwidth capabilities are not exceeded.

Consider **claim 9**, Choksi discloses a machine-readable storage, having stored thereon a computer program having at least one code section for providing bandwidth management in a hybrid wired/wireless local area network *(Abstract)*, the at least one code section executable by a machine for causing the machine to perform the steps comprising:

receiving from at least one of a first access point and a first switch, at least a first messaging protocol message for establishing a communication session *(call admission request is submitted – Column 7, Lines 5-15 and 33-41)*;

responsive to said first messaging protocol message, determining an available communication bandwidth for at least a portion of the hybrid wired/wireless local area network *(current bandwidth usage plus the requested bandwidth must not exceed a threshold – Column 7, Lines 61-67; Column 8, Lines 1-5; radio link can be an 802.11 based WLAN Column 3, Line 35)*; and

allocating bandwidth to accommodate said communication session *(read as the request is allowed – Column 8, lines 1-5)*.

However, Choksi discloses the allocation of resources and allowance of call admission requests, but fails to specifically disclose the notification to the first access point of the communication system to commence the connection.

In related prior art, Sundar et al. discloses a call connection management system for hybrid wired/wireless (WWAN and WLAN) networks which performs call setup functions such as channel assignment based upon requests from users. During the call connection setup, initiated by, for example, a handoff scenario, the serving BSC informs the desired BSC of the desire to handoff, and once the operation is the complete, acknowledgements are returned to the initiating parties *(Figure 12 – Page 6, Paragraphs 0074-0075)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Sundar et al. with those of Choksi in order to provide users with necessary bandwidth to complete their communications and control a network so that it's bandwidth capabilities are not exceeded.

Consider **claim 17**, Choksi discloses a system for providing bandwidth management in a hybrid wired/wireless local area network *(Abstract)*, the at least one code section executable by a machine for causing the machine to perform the steps comprising:

a receiver adapted to receive from at least one of a first access point and a first switch, at least a first messaging protocol message for establishing a communication session *(call admission request is submitted – Column 7, Lines 5-15 and 33-41)*;

at least one controller adapted to determine an available communication bandwidth for at least a portion of the hybrid wired/wireless local area network *(current bandwidth usage plus the requested bandwidth must not exceed a threshold – Column 7, Lines 61-67; Column 8, Lines 1-5; radio link can be an 802.11 based WLAN Column 3, Line 35)*; and

said at least one controller adapted to allocate bandwidth to accommodate said communication session *(read as the request is allowed – Column 8, lines 1-5)*.

However, Choksi discloses the allocation of resources and allowance of call admission requests, but fails to specifically disclose the notification to the first access point of the communication system to commence the connection.

In related prior art, Sundar et al. discloses a call connection management system for hybrid wired/wireless (WWAN and WLAN) networks which performs call setup functions such as channel assignment based upon requests from users. During the call connection setup, initiated by, for example, a handoff scenario, the serving BSC informs the desired BSC of the desire to handoff, and once the operation is the complete, acknowledgements are returned to the initiating parties *(Figure 12 – Page 6, Paragraphs 0074-0075)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Sundar et al. with those of Choksi in order to provide users with necessary bandwidth to complete their communications and control a network so that it's bandwidth capabilities are not exceeded.

Consider **claim 2**, as applied to claim 1 above, Choksi as modified by Sundar et al. further discloses receiving said at least a first messaging protocol message by at least one of a second switch and a second access point *(Sundar et al. – the serving WLAN MSC informs the desired WWAN BSC of the handoff requests – Figure 12, Steps 1204-1210 – Page 6, Paragraph 0074)*.

Consider **claim 3**, as applied to claim 2 above, Choksi as modified by Sundar et al. further discloses requesting bandwidth usage information from at least one of said first access

point and said first switch using said at least a first messaging protocol *(Choksi – call admission request are single bandwidth requests – Column 7, Lines 42-48)*.

Consider **claim 4**, as applied to claim 3 above, Choksi as modified by Sundar et al. further discloses de-allocating said allocated bandwidth using at least a third messaging protocol message subsequent to termination of said established communication session *(Sundar et al. – once the mobile has handed off to the WWAN, the WWAN notifies the WLAN MSC that it may clear the resources previously allocated for the mobile – Figure 12, steps 1226-1228 – Page 6, Paragraph 0074)*.

Consider **claim 5**, as applied to claim 4 above, Choksi as modified by Sundar et al. further discloses sending said at least a third messaging protocol message from at least one of said second switch and said second access point to at least one of said first switch and said first access point *(Sundar et al. – once the mobile has handed off to the WWAN, the WWAN notifies the WLAN MSC that it may clear the resources previously allocated for the mobile – Figure 12, steps 1226-1228 – Page 6, Paragraph 0074)*.

Consider **claim 6**, as applied to claim 5 above, Choksi as modified by Sundar et al. further discloses receiving bandwidth information from at least one of a quality of service management process, a load balancing management process, a session control process, and a network management process using at least a fourth messaging protocol message *(Choksi – QoS policy is retrieved during the bandwidth allocation request – Column 6, Lines 60-67 and Column 7, Lines 5-15)*.

Consider **claim 7**, as applied to claim 6 above, Choksi as modified by Sundar et al. further discloses requesting said bandwidth information from said quality of service management

process, said load balancing management process, said session control process, and said network

management process using a fifth messaging protocol message *(Choksi – QoS policy is retrieved*

during the bandwidth allocation request – Column 6, Lines 60-67 and Column 7, Lines 5-15).

Consider **claim 8**, as applied to claim 7 above, Choksi as modified by Sundar et al.

further discloses that said first, second, third, fourth, and fifth messaging protocol messages each

comprise at least one message selected from the group consisting of an access point status

message, access point configuration message, a switch status message, a switch configuration

message, a client status message, and a device discovery message *(Choksi – the messages*

request the status of the access points, hence gaining their status and configuration – Column 7,

Lines 42-47; Sundar et al. – device discovery is used to determine available networks – Page 4,

Paragraphs 0055-0057; Sundar et al. – BSCs determine statuses of access points to perform call

connections – Page 6, Paragraph 0074).

Consider **claim 10**, as applied to claim 9 above, Choksi as modified by Sundar et al.

further discloses receiving said at least a first messaging protocol message by at least one of a

second switch and a second access point *(Sundar et al. – the serving WLAN MSC informs the*

desired WWAN BSC of the handoff requests – Figure 12, Steps 1204-1210 – Page 6, Paragraph

0074).

Consider **claim 11**, as applied to claim 10 above, Choksi as modified by Sundar et al.

further discloses requesting bandwidth usage information from at least one of said first access

point and said first switch using said at least a first messaging protocol *(Choksi – call admission*

request are single bandwidth requests – Column 7, Lines 42-48).

Consider **claim 12**, as applied to claim 11 above, Choksi as modified by Sundar et al.

further discloses de-allocating said allocated bandwidth using at least a third messaging protocol

message subsequent to termination of said established communication session *(Sundar et al. –*

once the mobile has handed off to the WWAN, the WWAN notifies the WLAN MSC that it may

clear the resources previously allocated for the mobile – Figure 12, steps 1226-1228 – Page 6,

Paragraph 0074).

Consider **claim 13**, as applied to claim 12 above, Choksi as modified by Sundar et al.

further discloses sending said at least a third messaging protocol message from at least one of

said second switch and said second access point to at least one of said first switch and said first

access point *(Sundar et al. – once the mobile has handed off to the WWAN, the WWAN notifies*

the WLAN MSC that it may clear the resources previously allocated for the mobile – Figure 12,

steps 1226-1228 – Page 6, Paragraph 0074).

Consider **claim 14**, as applied to claim 13 above, Choksi as modified by Sundar et al.

further discloses receiving bandwidth information from at least one of a quality of service

management process, a load balancing management process, a session control process, and a

network management process using at least a fourth messaging protocol message *(Choksi – QoS*

policy is retrieved during the bandwidth allocation request – Column 6, Lines 60-67 and Column

7, Lines 5-15).

Consider **claim 15**, as applied to claim 14 above, Choksi as modified by Sundar et al.

further discloses requesting said bandwidth information from said quality of service management

process, said load balancing management process, said session control process, and said network

management process using a fifth messaging protocol message *(Choksi – QoS policy is retrieved during the bandwidth allocation request – Column 6, Lines 60-67 and Column 7, Lines 5-15)*.

Consider **claim 16**, as applied to claim 15 above, Choksi as modified by Sundar et al. further discloses that said first, second, third, fourth, and fifth messaging protocol messages each comprise at least one message selected from the group consisting of an access point status message, access point configuration message, a switch status message, a switch configuration message, a client status message, and a device discovery message *(Choksi – the messages request the status of the access points, hence gaining their status and configuration – Column 7, Lines 42-47; Sundar et al. – device discovery is used to determine available networks – Page 4, Paragraphs 0055-0057; Sundar et al. – BSCs determine statuses of access points to perform call connections – Page 6, Paragraph 0074)*.

Consider **claim 18**, as applied to claim 17 above, Choksi as modified by Sundar et al. further discloses that the receiver is further adapted to receive said at least a first messaging protocol message by at least one of a second switch and a second access point *(Sundar et al. – the serving WLAN MSC informs the desired WWAN BSC of the handoff requests – Figure 12, Steps 1204-1210 – Page 6, Paragraph 0074)*.

Consider **claim 19**, as applied to claim 18 above, Choksi as modified by Sundar et al. further discloses that the at least one controller is adapted to request bandwidth usage information from at least one of said first access point and said first switch using said at least a first messaging protocol *(Choksi – call admission request are single bandwidth requests – Column 7, Lines 42-48)*.

Consider **claim 20**, as applied to claim 19 above, Choksi as modified by Sundar et al.

further discloses that the at least one controller is adapted to de-allocate said allocated bandwidth

using at least a third messaging protocol message subsequent to termination of said established

communication session *(Sundar et al. – once the mobile has handed off to the WWAN, the*

WWAN notifies the WLAN MSC that it may clear the resources previously allocated for the

mobile – Figure 12, steps 1226-1228 – Page 6, Paragraph 0074).

Consider **claim 21**, as applied to claim 20 above, Choksi as modified by Sundar et al.

further discloses that the at least one controller is adapted to send said at least a third messaging

protocol message from at least one of said second switch and said second access point to at least

one of said first switch and said first access point *(Sundar et al. – once the mobile has handed off*

to the WWAN, the WWAN notifies the WLAN MSC that it may clear the resources previously

allocated for the mobile – Figure 12, steps 1226-1228 – Page 6, Paragraph 0074).

Consider **claim 22**, as applied to claim 21 above, Choksi as modified by Sundar et al.

further discloses that the receiver is adapted to receive bandwidth information from at least one

of a quality of service management process, a load balancing management process, a session

control process, and a network management process using at least a fourth messaging protocol

message *(Choksi – QoS policy is retrieved during the bandwidth allocation request – Column 6,*

Lines 60-67 and Column 7, Lines 5-15).

Consider **claim 23**, as applied to claim 22 above, Choksi as modified by Sundar et al.

further discloses that at least one controller is adapted to request said bandwidth information

from said quality of service management process, said load balancing management process, said

session control process, and said network management process using a fifth messaging protocol

message *(Choksi – QoS policy is retrieved during the bandwidth allocation request – Column 6,*

Lines 60-67 and Column 7, Lines 5-15).

Consider **claim 24**, as applied to claim 23 above, Choksi as modified by Sundar et al.

further discloses that said first, second, third, fourth, and fifth messaging protocol messages each

comprise at least one message selected from the group consisting of an access point status

message, access point configuration message, a switch status message, a switch configuration

message, a client status message, and a device discovery message *(Choksi – the messages*

request the status of the access points, hence gaining their status and configuration – Column 7,

Lines 42-47; Sundar et al. – device discovery is used to determine available networks – Page 4,

Paragraphs 0055-0057; Sundar et al. – BSCs determine statuses of access points to perform call

connections – Page 6, Paragraph 0074).

Consider **claim 25**, as applied to claim 23 above, Choksi as modified by Sundar et al.

further discloses that at least one controller is a bandwidth management controller, a quality of

service controller, a load balancing controller, a session controller, and a network management

controller *(Choksi – Column 4, Lines 18-46).*

Conclusion

1.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

2.   Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

        Commissioner for Patents
        P.O. Box 1450
        Alexandria, VA 22313-1450

        Hand-delivered responses should be brought to

        Customer Service Window
        Randolph Building
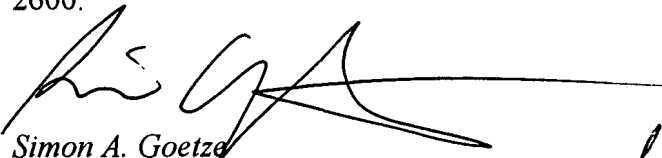   401 Dulany Street
        Alexandria, VA 22314

3.   Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Simon A. Goetze whose telephone number is (571) 270-1113.

The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm and

Friday from 7:30am to 4:00pm.

        If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.
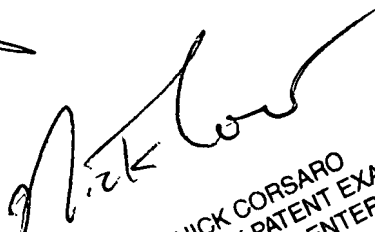
Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-

3028.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist/customer service whose telephone number is (571) 272-

2600.

Simon A. Goetze
S.A.G./sag

May 17, 2007

NICK CORSARO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600